

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

MDOT PROJECT MANAGER Kim Nowack			JOB NUMBER (JN)	CONTROL SECTION (CS) 86000
DESCRIPTION IF NO JN/CS Underwater bridge inspection and hydrographic survey - Mackinac Bridge				
MDOT PROJECT MANAGER: Check all items to be included in RFP. WHITE = REQUIRED GRAY SHADING = OPTIONAL			CONSULTANT: Provide only checked items below in proposal.	
Check the appropriate Tier in the box below				
<input type="checkbox"/> TIER I (\$25,000-\$99,999)	<input checked="" type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Understanding of Service	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Safety Program</i>	
N/A	<input type="checkbox"/>	<input type="checkbox"/>	Organization Chart	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Past Performance	
Not required as part of official RFP	Not required as part of official RFP	<input type="checkbox"/>	Quality Assurance/Quality Control	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location. The percentage of work performed in Michigan will be used on all contracts unless the contract is for on-site inspection, then location should be scored for the on-site inspection.	
N/A	N/A	<input type="checkbox"/>	Presentation	
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)	
3 pages including cover sheet (No Resumes)	7 pages	19 pages	Total maximum pages for RFP not including key personnel resumes	

REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Requests for Proposals.**

RFP SPECIFIC INFORMATION

☐ BUREAU OF HIGHWAYS ☐ BUREAU OF TRANSPORTATION PLANNING ** ☒ OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

☒ NO ☐ YES DATED _____ THROUGH _____

<input checked="" type="checkbox"/> Prequalified Services – See page <u>1</u> of the attached Scope of Services for required Prequalification Classifications.	<input type="checkbox"/> Non-Prequalified Services - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed.
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☒ **Qualifications Based Selection** – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the selection team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

**** For RFP's that originate in Bureau of Transportation Planning only**, a price proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning (**see address list, page 2**). The price proposal must be submitted in a sealed manila envelope, clearly marked in large red letters **"PRICE PROPOSAL – TO BE OPENED ONLY BY SELECTION SPECIALIST."** The vendor's name and return address **MUST** be on the front of the envelope. The price proposal will only be opened for the highest scoring proposal. Unopened price proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your bid being opened erroneously by the mail room.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

☐ **Qualifications Review / Low Bid** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

☐ **Best Value** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

☐ **Low Bid** (no qualifications review required - no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked in large red letters **"SEALED BID – TO BE OPENED ONLY BY SELECTION SPECIALIST."** The vendor's name and return address **MUST** be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room.

PROPOSAL SUBMITTAL INFORMATION

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER 3	PROPOSAL DUE DATE 3/14/07	TIME DUE 4 pm
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PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

☒ MDOT Project Manager ☐ MDOT Other

Kim Nowack
Mackinac Bridge Authority
N 415 I-75
St. Ignace, MI 49781

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

Lansing Regular Mail	OR	Lansing Overnight Mail
<input checked="" type="checkbox"/> Secretary, Contract Services Div - B225 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B225 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
<input type="checkbox"/> Contract Administrator/Selection Specialist Bureau of Transportation Planning B340 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B340 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

- 5100D – Request for Proposal Cover Sheet
- 5100G – Certification of Availability of Key Personnel

(These forms are not included in the proposal maximum page count.)

**MACKINAC BRIDGE
UNDERWATER BRIDGE INSPECTION
and
HYDROGRAPHIC SURVEY**

Maximum number of pages allowed for RFP response:

The scope of work for this project requests that the consultant submit examples of the format they would propose to use for the inspection report. These pages will be in addition to the maximum allowable shown on form 5100B.

**MICHIGAN DEPARTMENT OF TRANSPORTATION
MACKINAC BRIDGE AUTHORITY**

**SCOPE OF SERVICES
for
UNDERWATER BRIDGE INSPECTION
and
HYDROGRAPHIC SURVEY**

CONTROL SECTION: **86000**

JOB NUMBER: None

PROJECT LOCATION: Mackinac Bridge

DESCRIPTION OF WORK: The Mackinac Bridge Authority is seeking a proposal from a prequalified inspection firm (CONSULTANT) to perform in-service safety inspections of submerged substructure elements on the Mackinac Bridge and a hydrographic survey of the lake bottom in accordance with National Bridge Inspection Standards (NBIS). The inspection of the piers is termed “diver inspection”. The inspection of the lake bottom is termed “hydrographic survey”.

ANTICIPATED START DATE: June 2007

ANTICIPATED COMPLETION DATE: Dec 2007

PRIMARY PREQUALIFICATION CLASSIFICATION: Underwater Bridge Inspection

SECONDARY PREQUALIFICATION CLASSIFICATION: None Required

DBE REQUIREMENT: 0%.

MBA PROJECT MANAGER

Kim Nowack, P.E.
Mackinac Bridge Authority
N 415 I-75
St. Ignace, MI 49781
Phone: (906) 643-7600
Fax: (906) 643- 7668

The consultant shall contact the Project manager prior to beginning any work on this project.

GENERAL INFORMATION

The scope of work includes performing underwater inspection of all piers and their submerged appurtenances and a hydrographic survey of the lake bottom in the vicinity of each pier. These inspections shall be performed in accordance with the requirements of the National Bridge Inspection Standards (NBIS). The inspection procedures shall be in accordance with the current edition of the AASHTO Manual for Condition Evaluation of Bridges 2nd Edition , 2000 and as amended by the 2001 interim specifications, Federal Highway Administration - Bridge Inspectors' Training Manual/90,. These inspections shall consist of sufficient observations and/or measurements to determine the physical and functional conditions of the underwater portions of the bridge and fully satisfy the National Bridge Inspection Standards.

The Consultant shall furnish all services and labor necessary to conduct and complete the Underwater Bridge Inspection Services described herein. The Consultant shall also furnish all materials, equipment, supplies, and incidentals necessary to perform the Services. The Services shall be performed to the satisfaction of the Department and MBA consistent with applicable professional standards.

The Consultant's principal contact with the MBA shall be through the designated MBA Project Manager.

The Services described herein are financed with public funds. The Consultant shall comply with all applicable Federal and State laws, rules, and regulations

PURPOSE

In accordance with the National Bridge Inspection Standards (NBIS), each bridge under MDOT jurisdiction, which has submerged substructure elements that cannot be checked by wading, must be inspected by a qualified diver on a periodic basis.

The deliverable for this authorization will be the "Inspection Report." This report will have several components as noted below and will be reviewed and attested to be accurate and complete under seal of a Professional Engineer.

DURATION & SCHEDULE

A. Schedule of Dates and Milestones

The CONSULTANT must develop a schedule to perform the inspections and hydrographic survey and submit it to the MBA PM for approval. The CONSULTANT must be prepared to begin work within three working days of receiving Notice to Proceed (NTP). Any changes to the schedule must be submitted to the MBA PM for approval prior to the change. Failure to progress in alignment with the schedule will be considered as failing to meet the terms of the contract and may result in the cancellation of the contract.

B. Meetings

The Diving Inspector and the Engineer must attend a pre-inspection meeting, a draft report review meeting, and a project closeout meeting. All meetings will be at the Mackinac Bridge Authority administration building at a time mutually agreed upon. The expected dates for these meetings are shown below, however they may be adjusted as mutually agreed to by both MBA PM and the CONSULTANT. It is also anticipated that several informal progress meetings or phone updates will occur during the contract duration.

1. Pre-inspection Meeting

The purpose of the Pre-inspection meeting is to cover the operational aspects of the inspection process with the MBA PM and/or other MDOT personnel, deliver and review the inspection schedule, exchange telephone numbers, reinforce safety issues, and answer any questions that the inspector or engineer may have.

It is anticipated that this meeting will be in June of 2007.

2. Draft Report Review Meeting

The purpose of the Draft Report Review Meeting is to review the Inspection Reports with the MDOT PM to allow the CONSULTANT to make necessary changes prior to the Project Closeout Meeting.

It is anticipated that this meeting will be in September of 2007.

3. Project Closeout Meeting

The purpose of the Project Closeout meeting is to submit the Inspection Reports and review them with the MBA PM. The MBA PM will also provide feedback to the CONSULTANT on the overall performance of the contract.

It is anticipated that this meeting will be in November of 2007.

STAFF QUALIFICATION REQUIREMENTS

The CONSULTANT must provide personnel with qualifications that meet or exceed the requirements as outlined by OSHA and the Federal Regulations. One individual may act in different capacities at different times; however, they must meet the qualifications of both jobs. At least one member of the team shall be a Qualified Team Leader per Federal Register 650.309 and shall be at the bridge at all times during each inspection.

A. DIVER INSPECTION TEAM COMPOSITION

The bridge will be inspected by a diving team of three (3) people composed of a Diver(s) and Tender(s). For open water dives, the team will be composed of a diver and two (2) tenders. The engineer may also serve as one of the team members if properly certified. All divers and inspection team leaders must meet the qualification requirements of the NBIS.

B. INSPECTION ENGINEER QUALIFICATIONS

The Inspection Engineer must have 3 years of experience in the inspection of underwater structures. They must have knowledge of NBIS inspection requirements and FHWA publications for foundation scour (HEC No's. 18 & 20).

They must be a Registered Professional Engineer in the state of Michigan. The Inspection Engineer must be on site during the diving operations. The inspection engineer will be the author of the inspection report and must be a qualified team leader who has completed the NHI course # 130055A, Safety Inspection of In-Service Bridges or a similar FHWA-approved two-week comprehensive bridge inspection class.

C. DIVER QUALIFICATIONS

The Diver Inspector(s) must be certified by a national recognized authority, such as the Professional Association of Diving Instructors (PADI) or Association of Commercial Diving Educators (ACDE) in the type of diving equipment that will be used for the inspections. They must be in sound physical condition and have proof of a medical physical examination within the last twelve (12) months on file with the company.

The Diver Inspector(s) must have a minimum of three (3) years of structural inspection experience with bridge and like structures **AND** recently completed the NHI course #130055A, Safety Inspection of In-Service Bridges or a similar FHWA-approved two-week comprehensive bridge inspection class and NHI course #130091, Underwater Bridge Inspection. This experience must be actual performance of the work and not supervision or ancillary activities.

The Diver Inspector(s) must possess good verbal communication skills and be able to write and sketch the observations found during the inspection.

D. DIVER TENDER QUALIFICATIONS

The Diver Tender(s) must have two (2) years of experience in assisting diver operations. This must be actual performance of the work and not supervision or ancillary activities.

INSPECTION AND REPORT REQUIREMENTS

The work associated with this project is broken into two phases: Site inspection and data gathering, and the completion of the report writing and communication of the information to MDOT. Both phases must be completed for successful completion of the project.

A. SITE INSPECTION

DIVER INSPECTION

Briefly stated, the Diver Inspection Team will go to the bridge site, enter the water with underwater breathing equipment, and complete a visual/tactile inspection (Level I as defined in the Bridge Inspector's Reference Manual) for the condition of the structure under the waters surface and just above it. This inspection will be done according to NBIS and will include a topographical examination of the streambed in and around the substructure elements and probing along the mud line for support. The Diver Inspection Team will record their observations in narrative form as well as with sketches and pictures as is appropriate. The Team will also record a video of each pier. The video will be annotated and/or have an accompanying log detailing the video contents so the location of the videotaping will be clear to the viewer.

Problems, which could affect the continued safe operation of the bridge, must be brought to the attention of the MBA PM before the Diver Inspection Team leaves the site.

HYDROGRAPHIC INSPECTION

Survey the lake bottom around thirty one (31) Mackinac Bridge piers in order to determine water depth and any scour activity. The dimensions of and approximate water depth at each pier is shown in the accompanying table. The piers to be surveyed are numbered three through thirty-three.

At the mud line, the Mackinac Bridge's piers are both round and rectangular in shape. For piers with a round plan section at the mud line, data points shall be taken at 10 foot intervals along lines extending 65 feet from the face of the given pier with 10 degree spacing. The 36 radials shall have a minimum of 7 data points with the first sounding being taken 5 feet away from the pier face.

For piers with a rectangular plan section at the mud line, data points shall be taken at 10 foot intervals along sides extending 65 feet from the face of the given pier with 10 foot spacing along the sides. Also, data points shall be taken at 10 foot intervals along lines extending 65 feet from the face of the given pier with 10 degree spacing at the corners of these piers. All lines shall have a minimum of 7 data points with the first sounding being taken 5 feet away from the pier face.

The contractor shall provide a table containing all data points' three axis coordinates.

The interface area between the piers and the bottom shall be sounded and or imaged in a manner that produces sufficient detail to detect scouring and is able to differentiate between actual elevation changes in the bottom and debris accumulation.

The contractor shall provide a means to determine any isolated bottom features that exist between the primary data points. The sonar imaging shall be corrected for any inherent distortion (slant angle), motion (heave, pitch, roll, and yaw), and provide measurement capabilities. Indicate the equipment to be used for this purpose.

The contractor shall provide a method of accurate positioning while establishing reference stationing during the entire course of the survey. The contractor shall include a specific means in their proposal concerning the positioning method while under the bridge.

The proposal shall include a description of the equipment intended to be used on this project.

The proposal shall include samples depicting the following final document elements:

1. A sample contour chart or digital terrain model including the structure.
2. A sample of the pier/ bottom interface cross section.
3. A sample of a three dimensional image.

B. REPORTS

The consultant will provide five hard copies of the report. The report will also contain one compact disk with electronic copies of the final report.

DIVER INSPECTION REPORT

The Diver Inspection Team will take the information and data obtained in the field and assemble it into a report for delivery to the MBA. The report will contain a written description of the conditions found at the site, above and below water as may be applicable, and contain a statement as to the condition of the substructure elements (i.e. good, fair, poor), identify all deleterious conditions and an estimate of the magnitude of each, and provide photographs and sketches of the substructure element and the effected areas. The conditions shall be reported in sufficient detail to make it possible to check and report significant changes during future inspections and to estimate the extent of any necessary repair. A recommended NBIS rating number must also be provided for the Substructure Elements (Item 60), Channel and Channel Protection (Item 61), Pier Protection (Item 111), and Scour Critical Bridges (Item 113). These recommended ratings will be only for the portion of the substructure below the water and will be given to the routine inspector for consideration. *The rating for Item 113 will be based on the “observed” scour condition; scour calculations are not part of this contract.*

The consultant team leader will also be responsible for entering the inspection

findings into the Michigan Bridge Inspection System (MBIS) system.

The report shall be cross-referenced and the narrative section shall include reference to drawings, photographs, videos, etc., that illustrate conditions being discussed. The recommendations, in particular, shall include cross-referencing to narrative, drawings and photographs. The report will be reviewed by a Professional Engineer registered in the State of Michigan for compliance with the NBIS and for the thoroughness of the inspection. The report will be signed and sealed attesting to this review.

The CONSULTANT will submit to the MBA PM a sample report page listing the standard observations/measurements for a review of the content and format. This format will be used for all the piers being inspected.

HYDROGRAPHIC INSPECTION REPORT

Results must be reported using four types of images of each pier: three-dimensional, profile, isometric and contour. The report from the previous hydrographic survey will be made available to the consultant in order for them to establish the appropriate scales for reporting to make comparisons between the years easier.

1. Three-dimensional: One colored view per pier – view to be based on field data
2. Profile: One per pier – view to be determined based on field data. All profiles must show the pier's edges.
3. Contour: One image per pier with colored shading. Contour interval to be determined based on field data. Contour sheets must show the pier's edges.
4. Isometric Display: One per pier – Isometric sheets must show the pier's edges.

EQUIPMENT

The CONSULTANT will be responsible for providing all equipment necessary to complete the project in an efficient and safe manner. The CONSULTANT will be responsible for selecting the type of dive equipment (SCUBA, surface-supplied air, or mixed gas) and hydrographic equipment that will best be suited for the work at a given site and is required to have all of the typical forms of commercial diving equipment available for the project. The boat or marine vessel used for the project must have room to accommodate the MBA PM.

The CONSULTANT must provide all of the necessary inspection tools for completion of the inspection. Typical items such as cameras, hammers, lights, message boards, and scrapers can be expected.

SAFETY

The Mackinac Bridge Authority requires safe working operations. The waterway at the bridge site is heavily traveled by commercial and pleasure boat traffic. All operations of the consultant must be

conducted in a manner that will not interrupt commercial traffic or be a threat to pleasure boaters. All inspection activities will be conducted during daylight hours and the dive boat operator must be constantly vigilant, and prepared to take action, if traffic threatens the diving operation. The consultant shall not work in hazardous weather conditions. The CONSULTANT must provide all of the necessary personal safety equipment for each employee at the work site. The diving consultant firm must be trained in all the applicable state and federal regulations as well as industry practices for the work being performed. It is not the responsibility of the MBA to verify the CONSULTANT's safety practices, however the Mackinac Bridge Authority project manager has the authority to have any individual removed who is found to be working unsafely. All equipment must be in sound working order, meeting applicable inspections for safe operation. Lost time due to equipment failures will not be paid for.

The CONSULTANT will be responsible for coordination with United States Coast Guard for diving operations located in designated Navigable Waters.

Some, but not all, of the regulations that can be expected to apply are the latest revisions of:

1. Michigan Occupational Safety and Health Administration regulations (MIOSHA) Part 79 & Part 504, Diving Operations.
2. Occupational Safety and Health Administration regulations (OSHA) Subpart N, Commercial Diving Standards.
3. Marine Occupational Safety and Health Standards (USCG Regulations), 46 CFR 197.200-197.488 plus Appendix A, Subchapter V.
4. Consensus Standards for Commercial Diving Operations, Association of Diving Contractors, latest edition (ADC Standards)

BRIDGE SECURITY

For the purposes of security background checks, all consultant and subconsultants shall submit a list of employees working under this contract to the Project Manager at the preinspection meeting. The employee list shall include the person's full name, driver's license number, social security number, place and date of birth. The list shall be updated if personnel are added or dropped from the workforce.

The CONSULTANT may not release any information about the bridge or the Inspection to anyone outside of the MBA. The CONSULTANT can be subject to penalties under Homeland Security Laws for unauthorized release of this information.

The CONSULTANT is not allowed to make copies of the information in the bridge files unless given written approval from the MBA PM.

REFERENCE MATERIALS

The CONSULTANT is to have the following reference material and be familiar with their contents.

1. National Bridge Inspection Standards (NBIS).

2. AASHTO Manual for Condition Evaluation of Bridges, 1994, and subsequent interim changes or the most recent version.
3. FHWA Publications:
 - a. “Bridge Inspector’s Reference Manual”, October, 2002, FHWA NHI 03-001.
 - b. “Culvert Inspection Manual”, Report No. FHWA-IP-86-2.
 - c. “Inspection of Fracture Critical Bridge Members”, Report No. FHWA-IP-86-26.
 - d. “Recording and Coding Guide for the Structure Inventory and Appraisal of Nation’s Bridges”, Report No. FHWA-PD-96-001, December, 95.
 - e. “Underwater Inspection of Bridges”, Report No. FHWA-DP-80, November, 1989.

VENDOR PAYMENT

All invoices/bills for services must be directed to the Department and follow the 'then current' guidelines. The latest copy of the “Professional Engineering Service Reimbursement Guidelines for Bureau of Highways” is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Vendor for Services rendered shall not exceed the “Cost Plus Fixed Fee Not to Exceed Maximum Amount” unless an increase is approved in accordance with the contract with the Vendor. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the CE activities of this Project. Hours spent in administrative, clerical, or accounting roles for billing and support, are not considered allowable hours; there will be no reimbursement for these hours.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer and the MDOT Project Engineer Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week.

Any variations to this rule should be included in the price proposal submitted by the vendor and must have prior approval by the MDOT Project Engineer Manager.

Mackinac Bridge Underwater Pier Inspection Basic Data

! 31 piers to inspect (piers no. 3 through 33)

! Depth of water varies from approx. 3 feet to approx. 140 feet, as follows (depths determined in Sept of 2000, and are approximate):

- " pier no. 3 through 8, less than 60' deep
- " pier no. 9 through 17, between 60'-100' deep
- " pier no. 18 through 20, between 100'-140' deep
- " pier no. 21 through 22, less than 60' deep
- " pier no. 23, between 60'-100' deep
- " pier no. 24 through 33, less than 60' deep

! Approximate sizes vary as shown below:

- " pier no. 3, 46' x 30'
- " pier no. 4 through 6, 24' x 46'
- " pier no. 7 through 10, 50' diameter
- " pier no. 11 through 12, 56' 4" diameter
- " pier no. 13 through 14, 50' diameter
- " pier no. 15, 44' 5" diameter
- " pier no. 16, 40' 5" diameter
- " pier no. 17, 135' x 115'
- " pier no. 18, 44' x 92'
- " pier no. 19 through 20, 116' diameter
- " pier no. 21, 2 @ 50' diameter
- " pier no. 22, 135' x 115'
- " pier no. 23, 50' diameter
- " pier no. 24, 42' diameter
- " pier no. 25 through 27, 38' diameter
- " pier no. 28, 46' x 32'
- " pier no. 29, 24' x 46'
- " pier no. 30 through 33, 46' x 26'